



M20A1 SIMPLIFIED COLLECTIVE PROTECTION EQUIPMENT (SCPE)

Background: The M20 SCPE was developed and type classified in June 1986 from Advanced Development. The SCPE Pre-planned Product Improvement (P3I) Program included a 9-month dual contract award with a shoot-off to determine which contractor would be retained through type classification. The hardware design was evaluated through a Government and contractor conducted engineering design test. Concurrent technical tests and user tests were conducted on hardware manufactured to a level III technical data package. The SCPE P3I program generated the M20A1 and six M28 CPE configurations. The M20A1 SCPE fills the gap between the basic M20 SCPE system and the Chemical and Biological Protected Shelter (CBPS), the replacement for the M51 Shelter, providing a clean operating environment as well as a rest and relief capability for units in various theaters of operation. The M20A1 has the M20 mission profile and will replace it by attrition.



Physical Description: The M20A1 SCPE is a lightweight, low cost, modular system that provides NBC collective protection for existing structures. It consists of a large, cylindrical-shaped liner (10 feet high by 16 feet in diameter) designed to be inflated inside a room or building. A support kit contains a motor blower for inflation and flexible air ducts to direct the air. A Hermetically Sealed Filter Canister (HSFC) is provided to filter ambient air before it is ducted into the liner. A collapsible protective entrance (PE) attaches to the inflated liner and serves as an airlock for personnel entry/exit. A recirculation filter, located inside the liner near the PE, provides an extra margin of agent filtration. The system comes with two packaged spare liners. The systems can be interconnected with an adapter to provide more interior volume. A single packaged M20A1 SCPE system weighs approximately 500 pounds and requires 40 cubic feet. The M20A1 SCPE is available under NSN 4240-01-330-7806.

Use/Function: The M20A1 SCPE provides collective protection for up to 10 individuals against NBC agents when deployed inside a room or building by means of a 0.6 iwg overpressure provided by a 200 CFM filtered airflow. The M20A1 is a clean air shelter that allows personnel to perform their duties unencumbered by individual protective equipment. The system operates on 110 VAC 60 Hz or European 240 VAC 50 Hz (with adapters). The M20A1 can be used as a command and control post, or rest and relief shelter in the HQ element of Theater Army, Corps, Division, Brigade, Battalion, or equivalent.

Requirement Documents:

- O&O Plan, approved Sep 84
- Letter Requirement, TRADOC ACN 29837, approved Feb 85
- BOIP approved in Apr 87 (for M20 fielding)
- Material Release approval in Apr 90 (M20 SCPE)

Key Requirements (improvements over basic M20 SCPE system):

- Addition of recirculation filter for increased rate entry/exit
- Liquid agent resistant liners
- Interface with existing Army environmental control units
- Reduced generated Electromagnetic Interference (EMI)

Acquisition Phase: The M20A1 production phase has been completed. Technical testing was completed in Sep 92. The M20A1 type classification actions were completed in Dec 92. System management has been delegated to SBCCOM in Rock Island, IL. Current efforts with the M20A1 SCPE are in the areas of production and customer support.

Acquisition Milestones: A firm, fixed-price production contract was awarded to Production Products Manufacturing & Sales, Inc., of St. Louis, MO. Deliveries were completed in Dec 96. A follow-on production contract for a small quantity of M20A1 SCPE systems was also awarded to Production Products in Aug 00.

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